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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/918,646	08/01/2001	Yuri Poeluev	06944.0046	2656

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EXAMINER	
NG, CHRISTINE Y	
ART UNIT	**PAPER NUMBER**
2616	

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/918,646	POELUEV ET AL.	
	Examiner	Art Unit	
	Christine Ng	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 August 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *10 and 11* is/are allowed.

6)☒ Claim(s) *1-9 and 12-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 August 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-8, 9 and 12-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1: It is unclear what the term "transparently" (lines 1 and 11) means. The term is not defined in the specification.

Claim 1 recites the limitation "said correspondents" in line 8. There is insufficient antecedent basis for this limitation in the claim.

Claim 1 recites the limitation "said initiating correspondent" in lines 10-11. There is insufficient antecedent basis for this limitation in the claim.

In claim 9: It is unclear what the term "transparently" (lines 1 and 9) means. The term is not defined in the specification.

In claim 12: It is unclear what the term "transparently" (lines 1 and 8) means The term is not defined in the specification.

In claim 12: It is unclear how the software module can "intercept and examine at least one negotiation packet from an initiating corresponding *prior* to said negotiation packet reaching said layer" (lines 8-9), when the software module is located "*at* a layer of a protocol stack" (line 6). The negotiation packet must reach the layer of the protocol stack since the software module is located at the layer.

In claim 15: It is unclear how the "PPP negotiation packets are intercepted by said software module located *at* said PPP layer *before* reaching said PPP layer" (lines 1-2). The negotiation packet must reach the PPP layer since the software module is located at the PPP layer.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

4. Claims 1-4, 6 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,773 to Blomfield-Brown et al.

Referring to claim 1, Blomfield-Brown et al disclose a method for transparently modifying a *packet data* compression parameter included in a negotiation packet (dwMessage message - startwave) during an establishment and configuration of a communication protocol, said method including the steps of:

Substituting at least one instruction set (waveformatex wfx) associated with said compression parameter (compression format) prior to a responding correspondent (Figure 5, audio output device 136) receiving said negotiation packet (dwMessage message - startwave), said at least one instruction set (wfx) being used to establish said communication protocol between said correspondents (Figure 5, audio input device 100 and audio output device 136). Refer to Column 9, lines 37-52. The method of substituting said at least one instruction set comprises the steps of:

A software module (Figure 5, voice-over-data application 130) disposed between said initiating correspondent (Figure 5, audio input device 100) and said responding correspondent (Figure 5, audio output device 136) transparently intercepting said negotiation packet (dwMessage message - startwave) sent from said initiating correspondent prior to said negotiation packet being received by said responding correspondent. The voice-over-data application 130 receives the startwave message before it can reach the audio output device 136. Refer to Column 10, lines 41-43.

Said software module examining said negotiation packet to determine whether a first instruction set (wfx) associated with a first compression option type (unavailable compression format) is present in the negotiation packet. Voice-over-data application 130 examines the requested compression format in the startwave message to see if it is a requested compression format that is unavailable for use. Refer to Column 10, lines 43-52.

If said first instruction set is present, said software module substituting said first instruction set (wfx) with a second instruction set (another wfx) associated with a second compression option type (desired compression format). If the requested compression format is unavailable, the voice-over-data application 130 responds with a new desired compression format. Refer to Column 10, line 53 to Column 11, line 3.

Said software module sending a response packet (dwMessage message – badformat and desired compression format) to said initiating correspondent, wherein said initiating correspondent receives said second instruction set (another wfx) and transmits subsequent packets utilizing said second compression option type to said

responding correspondent in accordance with said second instruction set. Refer to Column 10, line 53 to Column 11, line 15 and Column 11, line 65 to Column 12, line 1.

Blomfield-Brown et al do not disclose that the compression parameter is used for compressing the header.

However, Blomfield-Brown et al disclose in Figure 5 that the system includes a packet compressor 112 for compressing a packet header, which "significantly improves the bandwidth for the audio connection", "allowing faster transmission in the limited bandwidth available". Refer to Column 8, lines 9-18 and lines 43-65. Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to include that the compression parameter is used for compressing the header, the motivation being that compressing the header saves bandwidth which dramatically increases transmission rates.

Referring to claim 2, Blomfield-Brown et al disclose that said at least one instruction set (wfx) includes a compression request (dwMessage – startwave) for packet data compression. Refer to Column 9, lines 37-52 and Column 10, lines 41-43.

Blomfield-Brown et al do not disclose that the compression request is for header compression. Refer to the rejection of claim 1.

Referring to claim 3, Blomfield-Brown et al disclose that said at least one instruction set (wfx) includes a compression reject (dwMessage – badformat) for packet data compression. Refer to Column 9, lines 37-52 and Column 10, line 53 to Column 11, line 3.

Blomfield-Brown et al do not disclose that the compression reject is for header compression. Refer to the rejection of claim 1.

Referring to claim 4, Blomfield-Brown disclose that said compression parameter (compression format) is associated with at least one compression type option for packet data compression. Refer to Column 9, lines 37-52.

Blomfield-Brown et al do not disclose that the compression type option is for header compression. Refer to the rejection of claim 1.

Referring to claim 6, Blomfield-Brown disclose that said negotiation packets (dwMessage - startwave) are intercepted (by Figure 5, voice-over-data application 130) before reaching a layer of a protocol stack of said responding correspondent (Figure 5, audio output device 136). The voice-over-data application 130 receives the startwave message before it can reach the audio output device 136, which includes all protocol layers of the audio output device. Refer to Column 10, lines 41-43.

Referring to claim 12, Blomfield-Brown disclose a system for transparently modifying a *packet data* compression parameter (compression format) included in a negotiation packet (dwMessage – startwave) during establishment and configuration of a communication protocol, said parameter associated with at least one instruction set (wfx) for establishing a communication channel between a pair of correspondents (Figure 5, audio input device 100 and audio output device 136). Refer to Column 5, lines 63-67 and Column 9, lines 37-52. The system has:

A software module (Figure 5, voice-over-data application 130) disposed between said correspondents at a layer of a protocol stack (Figure 4B, applications layer 90)

included in a computer readable medium of a responding correspondent (Figure 5, audio output device 136), said software module configured to transparently intercept and examine at least one negotiation packet (dwMessage – startwave) from an initiating correspondent (Figure 5, audio input device 100) prior to said negotiation packet reaching said layer and configured to substitute a first instruction set (wfx) associated with said compression parameter with a second instruction set (another wfx) associated with a second compression parameter. If the requested compression format is unavailable, the remote application sets the wfx field to a desired compression format. Refer to Column 10, line 41 to Column 11, line 3.

Wherein subsequent packets to said responding correspondent are in accordance with said second instruction set (another wfx). Refer to Column 11, line 65 to Column 12, line 1.

Blomfield-Brown et al do not disclose that the compression parameter is used for compressing the header. Refer to the rejection of claim 1.

5. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,773 to Blomfield-Brown et al in view of U.S. Patent No. 5,535,199 to Amri et al.

Blomfield-Brown et al do not disclose that said header compression is implemented by a Van Jacobson compression algorithm.

Amri et al disclose that the Van Jacobson compression algorithm is the "most effective TCP header compression scheme" and is "a method of improving the efficiency of TCP/IP based applications by coding the packet header and reducing its

size" which results in "an improvement in the ratio of the number of data bytes to the total number of bytes sent across the network". Refer to Column 4, lines 50-56 and Column 7, lines 20-27. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the header compression is implemented by a Van Jacobson compression algorithm, the motivation being that the Van Jacobson compression algorithm is the most effective TCP header compression scheme which when implemented, can save bandwidth and increase transmission rate.

6. Claims 7, 8, and 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,773 to Blomfield-Brown et al in view of U.S. Patent No. 6,765,909 to Sen et al.

Referring to claims 7 and 13, Blomfield-Brown et al do not disclose that the layer of said protocol stack is a PPP layer.

Sen et al disclose in Figure 4 that the PPP layer 404 of the protocol stack supports Van Jacobson header compression and can provide a PPP header that encapsulates the compressed TCP/IP header from the TCP/IP header compression layer 402. Refer to Column 2, lines 35-42 and Column 5, lines 59-65. Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to include that the layer of said protocol stack is a PPP layer, the motivation being that the PPP data link layer is one layer below the TCP/IP layer and must support TCP/IP header compression in order to transport the packets down to the physical layer.

Referring to claims 8 and 14, Blomfield-Brown et al disclose that the negotiation packet is a sockets layer negotiation packet and not a PPP negotiation packet.

Sen et al disclose in Figure 4 that the PPP layer 404 of the protocol stack supports Van Jacobson header compression and can provide a PPP header that encapsulates the compressed TCP/IP header from the TCP/IP header compression layer 402. Refer to Column 2, lines 35-42 and Column 5, lines 59-65. Therefore, it would have been obvious to one or ordinary skill in the art at the time the invention was made to include at least one negotiation packet is a PPP negotiation packet, the motivation being so that PPP can negotiate a header compression format for the TCP/IP packets since PPP connects the TCP/IP layer with the physical layer for data transmission.

Referring to claim 15, Blomfield-Brown et al disclose that said negotiation packets (dwMessage – startwave) are intercepted by said software module (Figure 5, voice-over-data application 130) located at said layer before reaching said layer. Refer to the rejection of claim 6.

Blomfield-Brown et al do not disclose that the negotiation packets are PPP negotiation packets and that the layer is a PPP layer. Refer to the rejections of claims 7, 8, 13 and 14.

7. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,742,773 to Blomfield-Brown et al in view of U.S. Patent No. 5,535,199 to Amri et al, and in further view of U.S. Patent No. 6,765,909 to Sen et al.

Blomfield-Brown et al disclose a method for transparently *modifying packet data* compression of packets during an establishment and configuration of a communication protocol and communication channel between a pair of correspondents (Figure 5, audio input device 100 and audio output device 136), said method including the steps of:

An initiating correspondent (Figure 5, audio input device 100) transmitting negotiation packets (dwMessage – startwave) including at least one compression request packet having at least one packet data compression option type (wfx), said option type (wfx) associated with a first instruction set (compression format request in wfx) for said establishment and configuration of said communication protocol and channel. Refer to Column 9, lines 37-52.

A software module (Figure 5, voice-over-data application 130) disposed between said initiating correspondent and a responding correspondent (Figure 5, audio output device 136) transparently intercepting and examining said at least one compression request packet (dwMessage – startwave) before said at least one compression request packet reaches said responding correspondent's layer. The voice-over-data application 130 receives the startwave message before it can reach the audio output device 136, which includes all protocol layers of the audio output device. Refer to Column 10, lines 41-43.

Said software module determining said option type (wfx) included in said at least one compression request packet. Refer to Column 10, lines 43-52.

Said software module substituting said first instruction set (compression format request in wfx) with a second instruction set (another compression format request in

wfx) to said initiating correspondent, said second instruction set having an option type (dwMessage – badformat) rejecting said compression request. Refer to Column 10, line 53 to Column 11, line 3.

Transmitting subsequent data packets in accordance with said second instruction set (another compression format in wfx). Refer to Column 11, line 65 to Column 12, line 1.

Blomfield-Brown et al do not disclose that the compression parameter is used for compressing the header. Refer to the rejection of claim 1.

Blomfield-Brown et al also do not disclose that the method is used for disabling header compression.

Amri et al disclose in Figure 6b a header compression format negotiation between an originating DTE 152 and a remote DTE 160. When the originating DTE 152 determines that the remote DTE 160 cannot support a requested header compression scheme, DTE 152 can disable header compression by setting (Figure 10) the PID 516 in the call request packet 500 to "CC". Refer to Column 7, line 57 to Column 8, line 29 and Column 10, lines 6-39. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include that the method is used disabling header compression, the motivation being so that if a header compression format cannot be agreed upon between a source and a destination, no compression can be used.

Blomfield-Brown et al also do not disclose that the negotiation packets are PPP negotiation packets and are used for header compression of TCP/IP headers. Refer to the rejections of claims 7, 8, 13 and 14.

Allowable Subject Matter

8. Claims 10 and 11 are allowed.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christine Ng whose telephone number is (571) 272-3124. The examiner can normally be reached on M-F; 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Huy Vu can be reached on (571) 272-3155. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

C. Ng CN
September 25, 2006

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